

**REMARKS****Summary of the Office Action**

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishino (US 2002/096382) in view of Jones et al. (US 6,417,899).

Claims 5-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. (US 2004/0085496) in view of Park et al. (US 2002/0113931) and Makino (US 6,259,505).

Claims 12 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. in view of Jones et al.

Claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones et al. in view of Trapani et al. (US 2003/0002154).

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. in view of Park et al. and Jones et al.

Claim 17 is objected to for a minor informality.

**Summary of the Response to the Office Action**

Applicants have amended claims 1, 3, and 12 to further define the invention, and have amended claim 17 to correct a minor informality unrelated to patentability. Accordingly, claims 1-17 are pending for consideration.

**PTO-892**

Applicants respectfully request that Jones et al. (US 6,417,899) be cited on a PTO-892 in the next Communication sent by the USPTO since Jones et al. ('899) has been cited by the Examiner in the Office Action, but listed on the PTO-892 included with the Office Action.

**Objection to Claim 17**

Claim 17 is objected to for a minor informality. Accordingly, Applicants have amended claim 17 in accordance with the Examiner's comments. Thus, Applicants respectfully request that the objection to claim 17 be withdrawn.

**All Claims Define Allowable Subject Matter**

Claims 1-4 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Ishino (US 2002/096382) in view of Jones et al. (US 6,417,899). Applicants respectfully traverse this rejection for the following reasons.

Independent claims 1 and 3, as amended, recites source and drain electrodes "disposed at opposing sides of the active layer" and "a polarizing film formed on the passivation film to extend over the data line." In contrast to Applicants' claimed invention, Ishino explicitly discloses a unique thin film transistor structure such that the drain electrode 111 is disposed only on an upper portion of the amorphous silicon layer 108 without extending onto the gate insulating film 107. In further contrast, Applicants respectfully assert that Ishino is completely silent with regard to the use of a polarization film extending over the signal line 103. Similarly, Applicants respectfully assert that Jones et al. is completely silent with regard to a polarizing film formed on a passivation film to extend over a data line as well as the structures related to active devices, i.e., data/gate lines.

Accordingly, Applicants respectfully assert that Ishino and Jones et al., whether taken singly or combined, teach or suggest the combination of features recited by amended independent claims 1 and 3, and hence dependent claims 2 and 4.

Claims 5-11 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. (US 2004/0085496) in view of Park et al. (US 2002/0113931) and Makino (US 6,259,505).

Applicants respectfully traverse this rejection for the following reasons.

Initially, Applicants respectfully request that if the rejection is maintained that the Examiner provide some type of indication as to which of the different embodiments shown in FIGs. 6A-6D of Paukshto et al. that the Examiner is relying upon as grounds for rejecting the claims. Specifically, since Paukshto et al. uses the same reference numerals for each of the different structures shown in FIGs. 6A-6D, Applicants request which of FIGs. 6A-6D are being referenced.

The Office Action admits that Paukshto et al. “lacks disclosure of a black matrix formed on the transparent insulating substrate” and “[a] color filter formed on [an] upper surface of the black matrix.” Accordingly, the Office Action relies upon Park et al. for allegedly teaching the use of a black matrix and color filter structure for preventing light leakage. Thus, the Office Action concludes that it would have been obvious to “have a black matrix formed on the transparent insulating substrate [of Paukshto et al.]; and color filter formed on [an] upper surface of the black matrix for the benefit of preventing light leakage.” Applicants respectfully disagree.

Applicants respectfully assert that Paukshto et al. is directed to a transfective color LCD device such that a light path 612 from ambient light 616 is present during a reflective mode, and a light path 611 from a backlight unit 617 is present during a transmissive mode. Accordingly, the light path 612 is reflected using the reflective layer portions 608 and the light path 611 is transmitted exclusively through transparent regions between the reflective layer portions 608. Thus, since the junctions of the transparent regions and the reflective layer portions 608 are

aligned within the individual regions of the color filters 614, the light path 611 is inherently prevented from leaking into adjacent color filters 614 corresponding to the reflective layer portions 608. Therefore, Applicants respectfully assert that incorporating a black matrix structure in the device disclosed Paukshto et al. is unnecessary, and that one of ordinary skill in the art would not require a black matrix to be incorporated into the device of Paukshto et al.

The Office Action admits that Paukshto et al. “lacks disclosure of an overcoat film formed between the color filter layer and the polarizing film.” Accordingly, the Office Action relies upon Makino for allegedly teaching the use of an overcoat film to flatten the color filter surface. Thus, the Office Action concludes that it would have been obvious to “have an overcoat film formed between the color filter layer and the polarizing film for the benefit of flattening the color filter surface.” Applicants respectfully disagree.

Applicants respectfully assert that Paukshto et al. explicitly discloses that the surface of the matrix of color filters 614 is flat. Accordingly, Applicants respectfully assert that incorporating an overcoat layer upon the matrix of color filters 614 is unnecessary, and that one of ordinary skill in the art would not require an overcoat layer to be incorporated into the device of Paukshto et al.

For at least the reasons set forth above, Applicants respectfully assert that Paukshto et al., Park et al., and Makino, whether taken singly or combined, fail to teach or suggest the combination of features recited by independent claims 5 and 8, and hence dependent claims 6, 7, and 9-11.

Claims 12 and 14 stand rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. in view of Jones et al., and claim 13 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Jones et al. in view of Trapani et al. (US 2003/0002154). Applicants respectfully traverse these rejections for the following reasons.

Independent claim 12, as amended, recites a liquid crystal display device including, in part, “a color filter substrate having a black matrix.” In contrast to Applicants’ claimed invention, Paukshto et al. is directed to a transfective color LCD device such that a light path 612 from ambient light 616 is present during a reflective mode, and a light path 611 from a backlight unit 617 is present during a transmissive mode. Accordingly, the light path 612 is reflected using the reflective layer portions 608 and the light path 611 is transmitted exclusively through transparent regions between the reflective layer portions 608. Thus, since the junctions of the transparent regions and the reflective layer portions 608 are aligned within the individual regions of the color filters 614, the light path 611 is inherently prevented from leaking into adjacent color filters 614 corresponding to the reflective layer portions 608. Therefore, Applicants respectfully assert that incorporating a black matrix structure in the device disclosed Paukshto et al. is unnecessary, and that one of ordinary skill in the art would not require a black matrix to be incorporated into the device of Paukshto et al.

Applicant respectfully assert that Jones et al. and Trapani et al., whether taken singly or combined, remedy the deficiencies of Paukshto et al., as detailed above. Moreover, Applicants respectfully assert that neither Jones et al. nor Trapani et al., or any other prior art of record, provide proper motivation with which to incorporate a black matrix in to the device of Paukshto et al.

For at least the above reasons, Applicants respectfully assert that Paukshto et al., Jones et al., and Trapani et al., whether taken singly or combined, teach or suggest the combination of features recited by amended independent claim 12, and hence dependent claims 13 and 14.

Claim 15 stands rejected under 35 U.S.C. § 103(a) as being unpatentable over Paukshto et al. in view of Park et al. and Jones et al. Applicants respectfully traverse this rejection for the following reasons.

The Office Action admits that Paukshto et al. “lacks disclosure of a black matrix on [the] second substrate.” Accordingly, the Office Action relies upon Park et al. for allegedly teaching the use of a black matrix and color filter structure for preventing light leakage. Thus, the Office Action concludes that it would have been obvious to “have a black matrix formed on the transparent insulating substrate for the benefit of preventing light leakage.” Applicants respectfully disagree.

Applicants respectfully assert that Paukshto et al. is directed to a transfective color LCD device such that a light path 612 from ambient light 616 is present during a reflective mode, and a light path 611 from a backlight unit 617 is present during a transmissive mode. Accordingly, the light path 612 is reflected using the reflective layer portions 608 and the light path 611 is transmitted exclusively through transparent regions between the reflective layer portions 608. Thus, since the junctions of the transparent regions and the reflective layer portions 608 are aligned within the individual regions of the color filters 614, the light path 611 is inherently prevented from leaking into adjacent color filters 614 corresponding to the reflective layer portions 608. Therefore, Applicants respectfully assert that incorporating a black matrix

structure in the device disclosed Paukshto et al. is unnecessary, and that one of ordinary skill in the art would not require a black matrix to be incorporated into the device of Paukshto et al.

For at least the reasons set forth above, Applicants respectfully assert that Paukshto et al., Park et al., and Jones et al., whether taken singly or combined, fail to teach or suggest the combination of features recited by independent claim 15, and hence dependent claims 16 and 17.

For at least the above reasons, Applicants respectfully assert that the rejections under 35 U.S.C. § 103(c) should be withdrawn because none of the applied prior art of record, whether taken singly or combined, teach or suggest the combinations of features recited by independent claims 1, 3, 5, 8, 12, and 15, and hence dependent claims 2, 4, 6, 7, 9-11, 13, 14, 16, and 17.

### **CONCLUSION**

In view of the foregoing, Applicants respectfully request reconsideration and timely allowance of the pending claims. Should the Examiner feel that there are any issues outstanding after consideration of the response, the Examiner is invited to contact the Applicants' undersigned representative to expedite prosecution.

If there are any other fees due in connection with the filing of this response, please charge the fees to our Deposit Account No. 50-0310. If a fee is required for an extension of time under

37 C.F.R. § 1.136 not accounted for above, such an extension is requested and the fee should also be charged to our Deposit Account.

Respectfully submitted,

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